

REMARKS

This paper is responsive to the Non-Final Office Action dated November 24, 2004. Claims 1-33 were examined. Claims 1-18, 20-31 and 33 were pending. By way of the present amendment, claims 2, 4, and 33 are being canceled.

The applicant appreciates the courtesy extended by the Examiner in the interview of 12 November 2004. The claims discussed were 1-2, 4, 10, 18, 22, 24, 26, and 28-31 and Greene (U.S. Pat. No. 5,579,455). The proposed Examiner's amendment to place independent claims 1 and 10 in condition for allowance is being adopted herein.

Objection to the Specification

The applicant respectfully disagrees with the Examiner's objection to the specification as applicant believes that paragraph 1079 clearly supports claim 26. However, applicant has amended paragraph 1079 to incorporate the language from original claim 26. No new matter has been added. Accordingly, applicants request that the objection to the specification be reconsidered and withdrawn.

Objection to the Drawings

The drawings stand objected to under 37 CFR § 1.83(a). The Objection to the drawings has been addressed by amending Fig. 1 to show a block of initialization flags 133 as described in paragraph 1079 and original claim 26. No new matter has been added. In view of the revision to Fig. 1, applicant respectfully requests that the objection to the drawings under 37 C.F.R. § 1.83(a) be withdrawn.

Rejection Under § 102(b)

Claims 1-2, 5-8, 10-15, 24 and 28-29 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Greene (U.S. Pat. No. 5,579,455). Claims 3-4, 9, 16-17, and 25 stand rejected as obvious over Greene in view of Dawson (U.S. Pat. No. 6,567,099). Applicant appreciates that claims 18-23, 26-27 and 30-31 are allowed and that claims 33 has allowable subject matter.

Applicant notes that the Office action indicates that claim 1 would be allowable if it was amended to incorporate the limitations of claims 2 and 4.

Claims 1 and 10

Applicant has amended claim 1 to incorporate the limitations of claims 2 and 4 and claims 2 and 4 have been canceled. Thus claim 1 and all claims dependent thereon are in condition for allowance.

Applicant has amended claim 10 to incorporate the subject matter of claim 33, which has been cancelled. Accordingly, claim 10 and all claims dependent thereon are in condition for allowance.

Claims 24, 25, 28, and 29

With regards to claim 24, applicant respectfully submits that claim 24 distinguishes over Greene. Claim 24 recites a hierarchical image depth buffer, the hierarchical image depth buffer containing a plurality of entries, each of the plurality of entries associated with a set of the plurality of depth values within the image depth buffer, the set containing more than one depth value, at least one of the entries containing multiple near depth values and a far depth value corresponding to the set of the plurality of depth values. Greene fails to teach that at least one of the entries contains multiple near depth values. Instead, Greene teaches that each of the depth elements 512 can contain not only a Z-max element having the farthest depth of any display cell covered by the depth element 512, but also a Z-min element containing the nearest depth value of any of the display cells 204 covered by the depth element 512. Col. 11, lines 7-12. Thus, Greene fails to teach an entry having multiple near depth values. Accordingly, applicant submits that claim 24 distinguishes over Greene. Claim 25 depends on claim 24 and is patentable for at least the reason given for claim 24.

With regards to claim 28, applicant respectfully submits that claim 28 distinguishes over Greene. Claim 28 recites that at least one of the entries of the hierarchical image depth buffer includes multiple near and far values. Greene teaches each depth element has only a single near and far value. Greene teaches that each of the depth elements 512 can contain not only a Z-max element having the farthest depth of any display cell covered by the depth element 512, but also

a Z-min element containing the nearest depth value of any of the display cells 204 covered by the depth element 512. Col. 11, lines 7-12. But Greene fails to teach that one of the depth elements includes multiple near and far values. Accordingly, applicant submits that claim 28 distinguishes over Greene.

With regards to claim 29, applicant respectfully submits that claim 29 distinguishes over Greene. Claim 29 recites that each of the entries of the hierarchical image depth buffer includes at least two pairs of near and far values. Greene teaches each element having only a single near and far entry as pointed out above, not at least two pairs. Accordingly, applicant submits that claim 29 distinguishes over Greene.

In view of the above amendments and remarks, all claims are believed to be allowable over the art of record, and a Notice of Allowance to that effect is respectfully solicited. Nonetheless, if any issues remain that could be more efficiently handled by telephone, the Examiner is requested to call the undersigned at the number listed below.

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Respectfully submitted,



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AMENDMENTS TO THE DRAWINGS

The attached drawing sheet includes changes to Fig. 1 and replaces the original sheet including Fig. 1. Fig. 1 was amended to overcome the rejection under 37 CFR 1.83(a) by adding INIT flags block 133. No new matter has been added.

Attachment(s): Replacement Sheet including amended Fig. 1.